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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

KYLE, CHARLES R

ART UNIT	PAPER NUMBER
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3624

DATE MAILED: 01/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/679,848

Applicant(s)

MAY, R. RAYMOND

Examiner

Charles R Kyle

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date June 28, 2004.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Claim Objections

Objections to Claims 1-5 are withdrawn.

Claim Rejections - 35 USC § 112

The prior rejection is withdrawn

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-5 and 12 are rejected under 35 U.S.C. § 101 because, the claimed invention is directed to a non-statutory subject matter. Specifically the method claims as presented do not claim a technological basis in the pre-amble and the body of the claim. A recitation of modules is present; modules are commonly understood to be software, which has no technological basis, being only computer code. There is also a recitation of a "mechanism", but a thorough review of the Specification and Drawings reveals that this is again software. See for example, Fig. 2, which shows an auction mechanism stored in memory; this is clearly a software entity and contains no hardware. Without a claimed basis, the claims may be interpreted in an alternative as involving no more than a manipulation of an abstract idea and therefore non-statutory under 35 U.S.C. 101. In contrast, a method claim that includes in the body of the claim at least one structural / functional interrelationship which can only be computer implemented is considered to have a technological basis [See Ex parte Bowman, 61 USPQ2d 1669, 1671 (Bd. Pat. App. & Inter. 2001) - used only for content and reasoning since not precedential].

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In order to over come the 101 rejection above, the following preamble is suggested:

"A computer implemented method for ---", or something similar. Also, in the body of the claims include at least one structural / functional interrelationship which can only be computer implemented.

Claims 6-11 and 13 are rejected under 35 U.S.C. § 101 because, the claimed invention is directed to a non-statutory subject matter. Specifically the method claims as presented does not claim a technological basis in the pre-amble and the body of the claim. Without a claimed basis, the claims may be interpreted in an alternative as involving no more than a manipulation of an abstract idea and therefore non-statutory under 35 U.S.C. 101. In contrast, a method claim that includes in the body of the claim at least one structural / functional interrelationship which can only be computer implemented is considered to have a technological basis [See Ex parte Bowman, 61 USPQ2d 1669, 1671 (Bd. Pat. App. & Inter. 2001) - used only for content and reasoning since not precedential].

In order to over come the 101 rejection above, the following preamble is suggested:

"A computer implemented method for ---", or something similar. Also, in the body of the claims include at least one structural / functional interrelationship which can only be computer implemented.

Applicant has amended Claims 6-11, though not substantively. The recitation that at least a portion of function is performed indicates no substantial technological elements. As an example, receiving orders could be read as only additionally or incidentally done on a computer. Technological element recitation must make it clear that the inventive concept itself is fundamentally performed on a computer.

To explain, the United States Constitution under Art. I, §8, cl. 8 gave Congress the power to "[p]romote the progress of science and useful arts, by securing for limited times to authors and

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inventors the exclusive right to their respective writings and discoveries". In carrying out this power, Congress authorized under 35 U.S.C. §101 a grant of a patent to "[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition or matter, or any new and useful improvement thereof." Therefore, a fundamental premise is that a patent is a statutorily created vehicle for Congress to confer an exclusive right to the inventors for "inventions" that promote the progress of "science and the useful arts". The phrase "technological arts" has been created and used by the courts to offer another view of the term "useful arts". See *In re Musgrave*, 167 USPQ (BNA) 280 (CCPA 1970). Hence, the first test of whether an invention is eligible for a patent is to determine if the invention is within the "technological arts".

Further, despite the express language of §101, several judicially created exceptions have been established to exclude certain subject matter as being patentable subject matter covered by §101. These exceptions include "laws of nature", "natural phenomena", and "abstract ideas". See *Diamond v. Diehr*, 450, U.S. 175, 185, 209 USPQ (BNA) 1, 7 (1981). However, courts have found that even if an invention incorporates abstract ideas, such as mathematical algorithms, the invention may nevertheless be statutory subject matter if the invention as a whole produces a "useful, concrete and tangible result." See *State Street Bank & Trust Co. v. Signature Financial Group, Inc.* 149 F.3d 1368, 1973, 47 USPQ2d (BNA) 1596 (Fed. Cir. 1998).

This "two prong" test was evident when the Court of Customs and Patent Appeals (CCPA) decided an appeal from the Board of Patent Appeals and Interferences (BPAI). See *In re Toma*, 197 USPQ (BNA) 852 (CCPA 1978). In *Toma*, the court held that the recited mathematical algorithm did not render the claim as a whole non-statutory using the Freeman-Walter-Abele test as applied to *Gottschalk v. Benson*, 409 U.S. 63, 175 USPQ (BNA) 673 (1972). Additionally, the court decided separately on the issue of the "technological arts". The court developed a "technological arts" analysis:

The "technological" or "useful" arts inquiry must focus on whether the claimed subject matter...is statutory, not on whether the product of the claimed subject matter...is statutory, not on whether the prior art which the claimed subject matter purports to replace...is statutory, and not on whether the claimed subject matter is presently perceived to be an improvement over the prior art, e.g., whether it "enhances" the operation of a machine. In re Toma at 857.

In Toma, the claimed invention was a computer program for translating a source human language (e.g., Russian) into a target human language (e.g., English). The court found that the claimed computer implemented process was within the "technological art" because the claimed invention was an operation being performed by a computer within a computer.

The decision in State Street Bank & Trust Co. v. Signature Financial Group, Inc. never addressed this prong of the test. In State Street Bank & Trust Co., the court found that the "mathematical exception" using the Freeman-Walter-Abele test has little, if any, application to determining the presence of statutory subject matter but rather, statutory subject matter should be based on whether the operation produces a "useful, concrete and tangible result". See State Street Bank & Trust Co. at 1374. Furthermore, the court found that there was no "business method exception" since the court decisions that purported to create such exceptions were based on novelty or lack of enablement issues and not on statutory grounds. Therefore, the court held that "[w]hether the patent's claims are too broad to be patentable is not to be judged under § 101, but rather under §§ 102, 103 and 112." See State Street Bank & Trust Co. at 1377. Both of these analysis goes towards whether the claimed invention is non-statutory because of the presence of an abstract idea. Indeed, State Street abolished the Freeman-Walter-Abele test used in Toma. However, State Street never addressed the second part of the analysis, i.e., the "technological arts" test established in Toma because the invention in State Street (i.e., a computerized system for determining the year-end income, expense, and capital gain or loss for the portfolio) was already determined to be within the technological arts under the Toma test. This dichotomy has

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been recently acknowledged by the Board of Patent Appeals and Interferences (BPAI) in affirming a §101 rejection finding the claimed invention to be non-statutory. See *Ex parte Bowman*, 61 USPQ2d (BNA) 1669 (BdPatApp&Int 2001), non-precedential but cited for its reasoning.

In the present application, the Claims have no connection to the technological arts. None of the steps indicate any substantive connection to a computer or technology. Therefore, the claims are directed towards non-statutory subject matter. To overcome this rejection the Examiner recommends that Applicant amend the claims to better clarify which of the steps are being performed within the technological arts, such as incorporating a computer network or electronic network into the communicating steps; for example: "(a) communicating over a computer network a plurality of brand promotions...". The other claims could be similarly amended to include a computer network.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2, 4-8 and 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,136,501 *Silverman et al*, already of record, in view of *Parity Trademark History*, hereinafter, *Parity*.

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With respect to Claim 1, *Silverman* discloses the invention substantially as claimed, including in a computer implemented system for performing a two-way many to many auction for financial instruments (Col. 7, lines 7-18), the elements of:

A plurality of auction modules, each being associated with a trader, that receive orders for financial instruments from respective said traders (Col. 6, line 66 to col. 7, line 5; Col. 14, line 42 to col. 15, line 23), wherein said orders comprise a price, a quantity and an action (Figs. 4, 5);

An auction mechanism that receives the orders from the auction modules (Col. 15, lines 3-14) and credit preferences (Col. 18, lines 24-29) for each trader submitting an order, determines an auction price based on the received order and matches orders at said auction price based on said credit preferences of said traders (Col. 15, lines 23-36).

See also Col. 19 lines 58-68.

Silverman does not specifically disclose that matching of trades occurs above the auction price, although *Silverman* discusses matching off a best order at Col. 4, lines 6-28. *Parity* discloses matching of orders above an auction price at page 5, bracketed text. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the auction system of *Silverman* to allow matching of orders above an auction price because this would provide clearing of all offers and maximize profitability of the auction as set forth by *Parity*.

As to Applicant's newly claimed limitation that at least a portion of each order is filled, this is disclosed by *PARITY* and is admitted as asserted by *PARITY* at page 9, last paragraph of

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the Response, where Applicant states “Notably, despite Parity’s assertion that *the last accepted bid is filled...*”. See Response to Arguments.

With respect to Claim 2, *Silverman* discloses transaction confirmations at Col. 15, lines 23-42.

Concerning Claim 4, *Silverman* discloses bid and ask actions at Figs. 4 and 5.

Concerning Claim 5, *Silverman* discloses receiving credit preferences from an auction module at Col. 18, lines 23-29.

As to Claim 6, it is effectively the method form of Claim 1 and is rejected in a like manner.

With respect to Claims 7 and 8, see the discussion of Claims 6 and 2.

With respect to Claim 10, *Silverman* discloses transactions resulting from matches of paired orders at Col. 13, line 56 to Col. 14, line 41, particularly Col. 13, lines 6-8.

Concerning Claim 11, see the discussions of Claim 6 and 4.

Claims 3 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,136,501 *Silverman et al*, already of record, in view of *Parity* and further in view of US 6,012,046 *Lupien et al*.

With respect to Claim 3, *Silverman* discloses the invention substantially as claimed. See the discussion of claim 1 above. *Silverman* does not specifically disclose giving priority to orders having a higher price. *Lupien* discloses priority based on price at Col. 2, lines 58-61. It would have been obvious to one of ordinary skill in the art at the time the invention was made to

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modify *Silverman* with the priority price ordering of *Lupien* because this would match higher priced orders first to produce a more profitable auction.

Concerning Claim 9, see the discussion of Claims 6 and 3.

Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,136,501 *Silverman et al*, already of record, in view of *Parity Trademark History*, hereinafter, *Parity* and further in view of US 5,873,071 *Ferstenberg et al*.

With respect to Claims 12 and 13, *Silverman* discloses the invention substantially as claimed. See the discussion of Claims 1 and 6 above. *Silverman* does not specifically disclose prorata filling of offers in financial auctions. *Ferstenberg* discloses this limitation at Col. 15, lines 1-22. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify *Silverman* to include such prorata distribution for reasons of fairness specifically set out at the above-cited passage. Also note that *Ferstenberg*, as well as *Parity*, also discloses at least partial filling of all orders as argued by Applicant at the above cited passage and quoted here:

One measure of fairness is that all offers are at least partially satisfied on a prorata basis. Beyond this general preference, commodity allocation can be done in many manners reflecting objectives of the participants and the type of commodities exchanged.

Response to Arguments

Applicant's arguments filed September 23, 2004 have been fully considered but they are not persuasive.

At pages 5-6 of the Response, Applicant discusses the rejection under 35 USC 101. Applicant has amended, though not substantively. A review of the Claim language and

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Disclosure reveals that Claims 1-5 and 12-13 also lack a technological basis and are rejected.

See the rejection set forth above for detailed discussion.

At pages 6-8, Applicant discusses the prior art. Applicant notes that *Silverman* has an instance where market depth is only one, for a highest quote. This is an incomplete representation of the teachings of *Silverman*. Figs. 4 and 5 clearly show market depth of more than one and off market orders. Applicant attempts to limit *Silverman*.

At page 9, Applicant argues against the *Silverman* and *PARITY* references. Applicant states that *Silverman* does not disclose matching off best price; *PARITY* was relied on for this. An auction price less than best is clearly calculated as shown in the market depths of Figs. 4 and 5. Applicants Claims recited not particular "calculation" or feature of prices that distinguish over the prior art.

At last paragraph of page 9, Applicant again attempts to minimize the references. Applicant devises a hypothetical situation where *PARITY* does not fill all bids. Applicant admits just prior to this that *PARITY* discloses that a last accepted bid is filled. The Examiner notes that Applicant's invention is subject to exactly the same failing, absent an infinite supply of financial instruments. If it is possible that *PARITY* leaves bids unfilled, it is also possible that Applicant's invention does also. Nonetheless, *PARITY* discloses meeting all bids, as Applicant admits.

Applicant continues the prior line of hypothetical argument to page 10. Applicant makes reference to the newly claimed prorata distribution. This new limitation is addressed by the application of the *Ferstenberg* reference. Applicant argues limitations supposedly not disclosed by *Lupien*; the other references were relied on for these.

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At third full paragraph of page 10, Applicant argues against the combination of references. The references do differ, but there is no explicit disclosure in Silverman that teaches away from a broad market; Figs. 4 and 5 indeed suggest the desirability of such breadth. Also, the Examiner notes that *Silverman* teaches a combination of order price *and* credit information to determine a match. Thus a match off the absolute best of the market can well occur. Applicant concludes by restating that the references do not disclose matching at least a portion of all orders. *PARITY* as cited and also *Ferstenberg* disclose this limitation.

The rejections are maintained.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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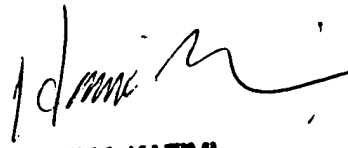
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles R Kyle whose telephone number is (703) 305-4458. The examiner can normally be reached on M-F 6:00-2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vincent A Millin can be reached on (703) 308-1065. The fax phone number for the organization where this application or proceeding is assigned is 703-305-7687.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

crk
December 27, 2004

Examiner Charles Kyle



HANI M. KAZIMI
PRIMARY EXAMINER